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THE DIGITALLY ENABLED BUSINESS CLINIC

FINAL REPORT

Northumbria University
NEWCASTLE

Newcastle Business School

CONTENTS

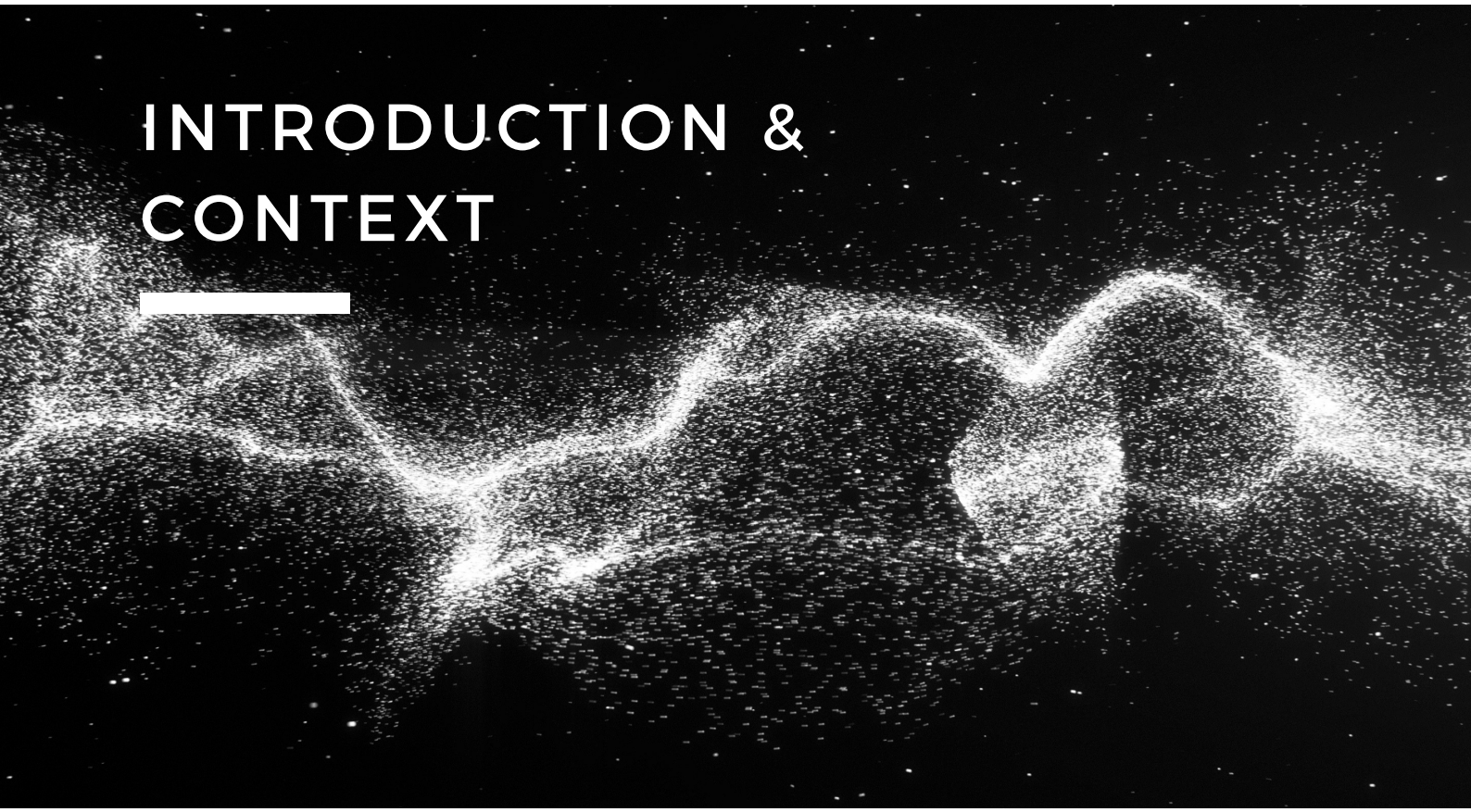
EXECUTIVE SUMMARY

The Digitally Enabled Business Clinic (DEBC) builds on the success of Northumbria University's Business Clinic (BC). The DEBC enables businesses to engage with university students and access free business consultancy, providing the latest knowledge from a range of disciplines and leading to positive business outcomes. We have created, tested and evaluated a digitally enabled model of the BC, which could enable the highly successful BC approach to be implemented quickly and cost-effectively by other universities. Digital marketing was tested to attract low to mid productivity SMEs and deliver free consultancy services.

Overall, 47 consultancy projects were delivered to clients via the DEBC. These were evaluated using 60 client interviews, in two stages, and 47 client quantitative surveys. Findings revealed clients valued the average consultancy project at £5,174, moreover these projects enhanced business productivity, and stimulated technology and modern business practice adoption. DEBC projects also sparked innovation, with clients identifying a total of 8 market strategy, 3 service design and 3 business process innovations. The total value of all 47 DEBC projects, based on the survey results, is £243,178. However, the findings also reveal referrals and attending networking events may be a more cost-effective means of attracting clients than digital marketing approaches.

In summary, the DEBC has been a phenomenal success. The model has generated £243,178 worth of consultancy for low productivity SMEs using an initial investment of just over £42,000. Areas for improvement are outlined, including greater requirements for the amount of student-client interaction and more cost-effective means of recruiting clients. Finally, important next steps are outlined so InnovateUK has a clear roadmap to test a full-trial of the DEBC.

Thanks must go to the Department for Business, Energy & Industrial Strategy, Business Basics programme and Innovate UK for which this proof concept would not have been possible without.



INTRODUCTION & CONTEXT

The Digitally Enabled Business Clinic (DEBC) builds on the success of Northumbria University's Business Clinic (BC). The DEBC enables businesses to engage with university students and access free business consultancy, providing the latest knowledge from a range of disciplines and leading to positive business outcomes. This project benefits from our experience gained from the tried and tested model of Northumbria's existing BC. We have created, tested and evaluated a digitally enabled model of the business clinic, which could enable the highly successful BC approach to be implemented quickly and cost-effectively by other universities. Digital marketing was tested to attract low to mid productivity SMEs and deliver free consultancy services.

The DEBC collaborated with our network contacts - including the North East Local Enterprise Partnership (NELEP), Tyne & Wear Chamber of Commerce and the Regional Technology Centre North. This helped us understand SMEs from struggling sectors who would benefit from digital advice. The project aimed to reach 30-40 SMEs of low to medium productivity, providing an opportunity to tap into the perspective of 'young eyes' from our motivated and innovative Business School students.

The DEBC provides a cross-functional range of advice (including digital marketing, finance, strategic management) through digital media and tools, removing the need for costly physical infrastructure. From our experience since 2013, we know that the BC model is effective. What made this project innovative is that we tested an alternative digitally-enabled model, which could be quickly scaled up. The project was used to determine whether a DEBC concept is a cost-effective way for SMEs to interact with a local university, gain pro-bono neutral advice, access state of the art knowledge and have the added value of the younger generation perspective. We monitored the reach, uptake and impact on business outcomes.

The 'how to' guide for implementing a DEBC provides a set of compelling case studies to underpin the formation of DEBCs in other regions. The UK industrial Strategy aims to support universities and businesses working together to innovate. Rolling out a network of DEBCs would be an innovative mechanism enabling UK businesses to easily connect with and benefit from existing technologies, new knowledge, insights and fresh perspectives of university business schools.

AIMS OF RESEARCH & APPROACH TAKEN

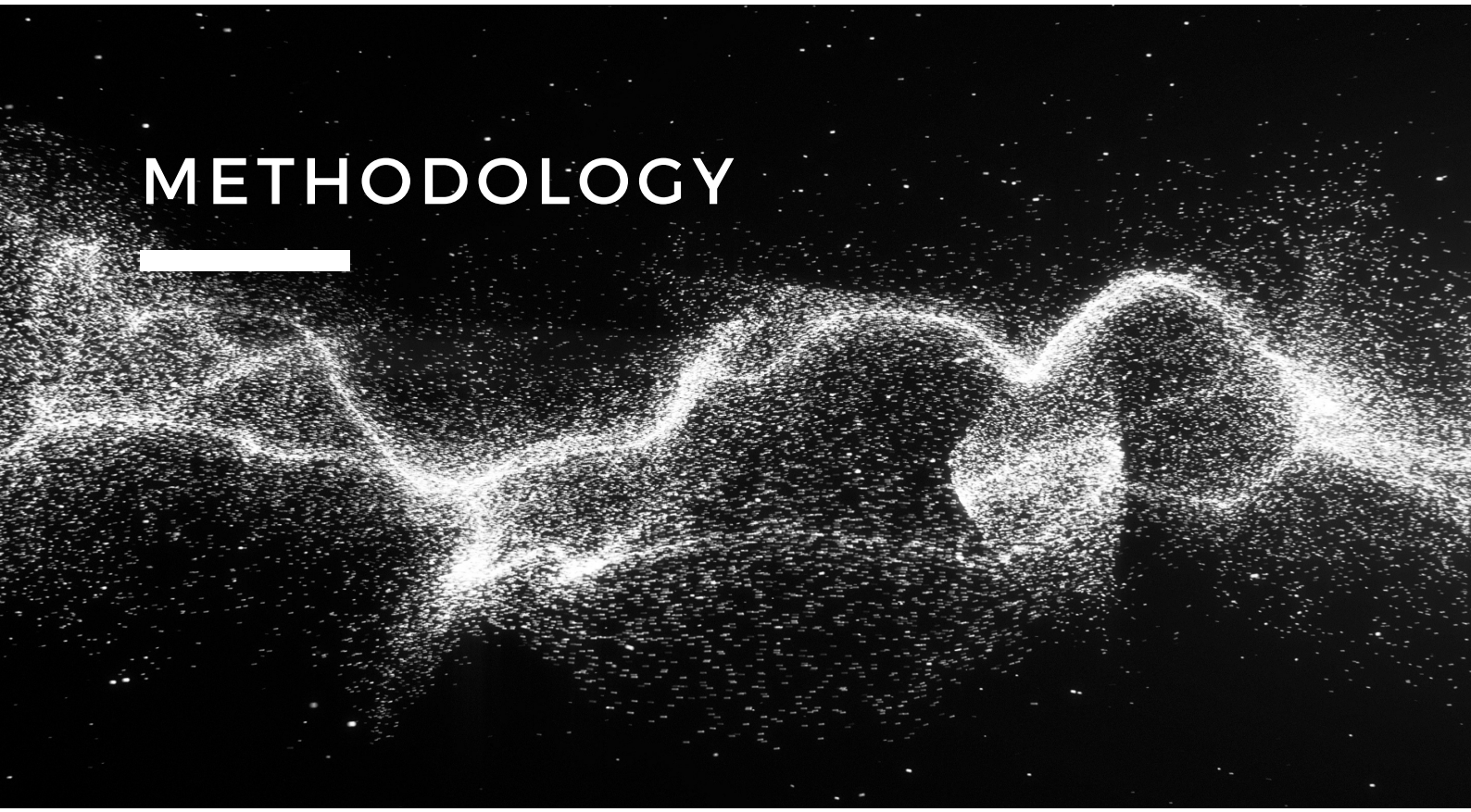
Aim

To establish if a Digitally Enabled Business Clinic (DEBC) is a cost-effective model to improve SME productivity.

Approach

This innovative project concept tested whether the DEBC is a cost-effective, quick-to-implement, way to widely reach out to SMEs, enabling them to interact with a local university, gain pro-bono neutral advice, enhance capacity and access state of the art knowledge and a younger generation perspective, boosting their productivity. Furthermore, rolling out such a network of DEBCs would be an innovative mechanism, enabling UK businesses to easily connect with and benefit from new knowledge, insights and fresh perspectives of final year undergraduates and postgraduates, who in turn benefit from applying their knowledge to real business challenges.

We created, tested and evaluated the DEBC, reporting on the business outcomes arising from the project. We also prepared a set of compelling case studies and a "how to" guide on setting up and operating a DEBC.



METHODOLOGY

Research design

This mixed methods research is underpinned by a pragmatic worldview and qualitative and quantitative approaches.

Qualitative semi-structured interviews

Firstly, 60 qualitative semi-structured interviews were conducted, in two stages, with 32 clients of the DEBC. Whilst 47 clients actually took part in the DEBC, the team decided to omit 15 from the qualitative data collection due to time and resource constraints.

- In stage 1, at the start of the process, 32 SMEs were interviewed to determine their existing productivity level, and their desired/target for improvement from engaging with the DEBC was established.

- In stage 2, at the end of the process, 28 SMEs were again interviewed to establish how well the consultancy report/advice had met with their expectations including productivity enhancement recommendations. The interviews explored how they plan to implement productivity recommendations. Thematic analysis was used to analyse the data.

Quantitative Surveys

Secondly, quantitative surveys were distributed to 47 DEBC clients and their respective student teams. 57 surveys were collected from student teams because whilst team leaders were the focus, the researchers also allowed other team members to complete the survey if they wished. In total, 47 team leaders and 10 team members were surveyed.

- The client survey, see Appendix A, used a 7-point Likert scale to assess the current and expected impact of the DEBC project on clients' productivity and their organisation more widely. Clients were also asked to assign monetary value to the project.

- The student survey, see Appendix B, also used 7-point Likert scales to assess students' overall satisfaction with the DEBC experience, and how the DEBC has affected their growth and development and competitiveness in the job market. Students were also asked about their use of technology during the project.

Analysis

The qualitative interviews were analysed via thematic analysis (Braun & Clarke, 2006), whilst descriptive statistics were used to analyse the quantitative data. The data sample of 47 clients is not enough to draw statistically significant conclusions, however the results of this initial study can inform the design of a Business Basics 'Full Trial'. The study was conducted in accordance with Northumbria University's ethical research policies/procedures.

Digital marketing strategy & results

Aim

The aim of the digital marketing strategy was to build wider brand awareness of the BC proposition on online channels - so that there was the opportunity for further reach of client acquisition. In addition to brand awareness, there was the requirement to drive enquiry submission forms on the website which would provide a pool of digitally engaged potential clients.

Strategy

A digital marketing strategy was implemented to target users who are likely to have an interest in receiving business consultancy services within the SME target audience. The channels implemented were chosen to target these users at various stages of their 'user journey' - from awareness to consideration to conversion.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101.

Chosen channels

- Prospecting display activity

This was used to build awareness of Northumbria University's BC proposition within the SME target audience - these users had been categorised through 3rd party data and from keyword analysis that showed intent for business consultancy services.

Prospecting display should be used primarily for brand awareness rather than a conversion tool. This was important for the BC to raise profile within the wider SME network.

RESULTS:
The display activity significantly outperformed the forecast for both impressions and clicks. We secured a click-through rate of 0.14% - which is a strong performance against forecast. More efficient costs in terms of CPM (cost per impression) meant that we were able to serve more impressions for the same budget.

Although this activity did not directly drive enquiry form submissions, 52 users went on to view the Northumbria Contact Us page following exposure to a BC ad. This indicated they were looking for a way to contact the University to find out more.

- Retargeting display activity

This activity was based on audiences built from professional business services pages of the Northumbria University website. This audience was considered as having an interest in the BC proposition, therefore we used retargeting display activity to try and encourage these users back to the website to find out more and submit an enquiry form. These users would be further on in their customer journey which should make them more likely to convert.

RESULTS:
The retargeting campaign was activated much later than planned as the retargeting audience pool took longer than anticipated to build. The performance once this activity was activated suggests this would have performed well for us had it been running for longer.

Despite limited impression delivery due to the small timeframe for the campaign, the retargeting activity delivered a higher than forecast click-through rate and two submitted contact us forms.

- Third-party activity

Having a fairly specific target audience for this proof of concept, the BC also tested third-party activity through an online publisher of regional UK business news - Bdaily. This activity comprised of an email to their subscribers, a display banner on their website and a featured article.

RESULTS:
The email activity drove the majority of submitted enquiry forms.
Click-through rates for the display banner and featured article were lower than the forecast provided by Bdaily, however, we maintain this was a useful brand awareness and education exercise.
Lower bounce rates from the Bdaily activity suggests this was a more qualified audience to target for the BC proposition.

- Overall views on digital marketing activity

The activity delivered a significant number of new users to the website. This shows the prospecting activity reached the new audience as required and achieved the relevant brand awareness. With more time and budget allocated, this digital marketing strategy would be reviewed and tested further.

- Limitations of this proof of concept activity

Due to budget constraints within the proof of concept, paid search advertising was considered as out of scope due to expensive cost per click volumes caused by high competition on 'business consultancy' terms that would be required to achieve the required brand awareness levels needed.

Attribution for digital marketing channels was not available due to internal and external restrictions which means it is difficult to fully understand the value of the digital channels used in this test.

Performance results

Media Channel	Audience	Impressions	Clicks	CTR	Cost
Display - Prospecting	Third Party Business Audiences	2,426,510	3,039	0.14%	£3,794
Display - Retargeting	Non-Converters	11,742	22	0.19%	
Display - B Daily Third Party Emails	National E Shot - Email Marketing Subscribers	10,851 sends, 2,049 opens	502	5.62%	£2,013
	Bulletin Banner - News Subscribers	55,000	N/A	0.11%	
	Featured Article & Social Sharing	5,017	N/A	N/A	
Tracking	N/A	N/A	N/A	N/A	£227
Total	N/A	2,500,318	3,625	0.14%	£6,033

Submitted enquiry forms directly attributed to digital marketing channels

Organisation	How did you find out about the business clinic	Channel (where available)
1	Digital Advert	
2	Digital Advert	
3	Social Media	Bdaily email
4	Recommended by a previous client	Bdaily email
5	Other	Bdaily email
6	Digital Advert	Bdaily email
7	Local publicity - newspaper, TV	Bdaily email
8	Social Media	Bdaily email
9	Friends or colleagues	Bdaily email
10	Other	Bdaily email
11	Digital Advert	
12	Digital Advert	
13	Digital Advert	Bdaily display advert
14	Other	Bdaily email

FINDINGS OF RESEARCH

The following section will highlight key research findings brought to light by the analysis of the qualitative and quantitative data discussed previously. Specifically, this section will discuss how the DEBC has impacted participating SMEs in relation to a number of critical areas including overall productivity, technology adoption, modern business practice adoption, and innovation, whilst also considering any potential room for improvement.

Impact on overall productivity

The DEBC has been able to provide valuable insights to clients from a range of industrial sectors. Although still at the early stages of actioning the suggestions made, participants were asked to speculate on the potential impact the consultancy provided would have on their productivity. As a broad indicator of impact, the clients were asked to show their level of agreement to the following statement:

"This project will likely enhance my organisation's productivity"

The results of which gave a mean score of 5.44 out of a possible 7, showing an overall positive position with 37 participants in agreement, 4 in disagreement, and a further 6 holding a neutral position (Figure 1). Clients were similarly asked to rate their agreement to the ability of their project results to impact financial performance, whilst this was slightly less so, there was still a notable skew towards the positive with a mean score of 4.85 out of 7.

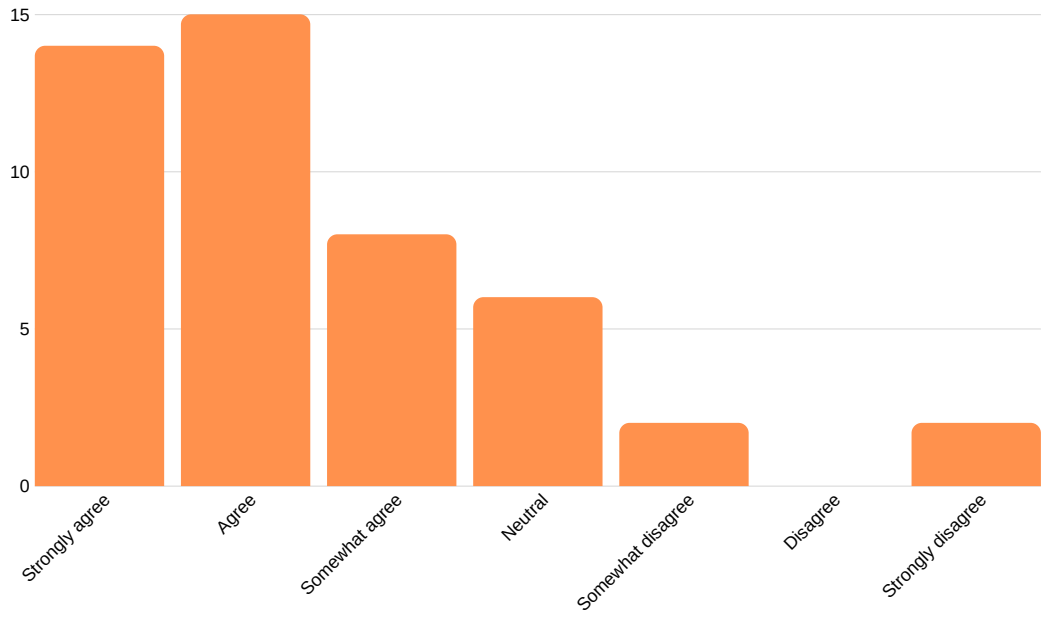


Figure 1: Likelihood of the DEBC Results Enhancing Productivity

To offer further clarity on the broad definition of productivity assigned during the survey, clients were given a chance to assign key performance indicators (KPIs) likely to be impacted during their DEBC project. Invariably, the KPIs chosen by each participant were significantly context dependent given the purpose of each project and the type of SME. For example, P, 12, considered employee engagement a critical area of productivity, where P, 1, assigned number of orders, website traffic and conversion rates. Regardless of the KPIs chosen, each client was asked to give a score out of ten during the initial interview, then speculate at the end of the DEBC project in light of the insights provided by their student team. Specifically, the clients were asked during the second round of interviews to rate their productivity at present (in light of the project insights), after six months, and again at twelve months after fully implementing the recommendations given.

The results of this qualitative enquiry support those seen within the survey data, with a total of 25 clients suggesting potential short-term improvements to some if not all of the productivity metrics set. However, it is notable that in some cases the initial impact was relatively small, for instance, P. 6, suggested their turnover would move from a 5.5 to 6.5 out of 10. Although in some cases, as was seen with P, 14, the increase was far more significant, seeing a move from 3 to 8 out of 10 for market research:

P, 14. "I have been much more pro-active in contacting clients (B2B), meeting with airports, safari parks and Jet2. We are have now increased productivity to 7/10 from 5/10 and making progress. Market research moved from 3/10 to 8/10 as the report gives us a blueprint, it's independent and supports what my business is doing".

When looking further in the future, the findings once again show a positive outlook based on the DEBC interventions. When asked to predict their productivity scores after six months, a total of 17 clients expected further increases, highlighting future potential after fully implementing recommendations. A key example of this is P, 22, who has been able to implement some of the recommendations around their marketing strategy, but admit more time is required to see results. As a consequence of the changes made, they are able to target appropriate market segments more effectively, leading to a predicted two-fold increase in their turnover within 6 months, moving their score from a 4 to an 8 out of 10.

P, 22. "Turnover within the next six months, I'm very productively working to maximise that, so that will go right up to an 8"

Finally, the longer-term impact on productivity (twelve months after the end of each project) once again showed some positive predictions, with a total of 9 clients suggesting further small increases. It is worth noting that where the long-term outlook does not show any significant increase in productivity within the client sample, this was mainly due to a reluctance on the part of participants to speculate so far in advance. This issue was also seen at the six-month period, although in this case, only 2 organisations were unwilling to provide a speculative productivity forecast.

Impact on technology adoption

Regarding technology adoption as a result of the DEBC projects, clients were asked to anticipate the likelihood of this occurring by rating their level of agreement to the following question:

"I anticipate our organisation will adopt new technologies as a result of this consultancy"

The survey results (figure 2), show a strong proportion of clients expecting to adopt new technologies as a result of their project, with a total of 43% giving a positive response to the statement. Although this result is by no means all-inclusive, it is most certainly expected given the range of projects within this sample which in turn led to a high percentage of neutral responses.

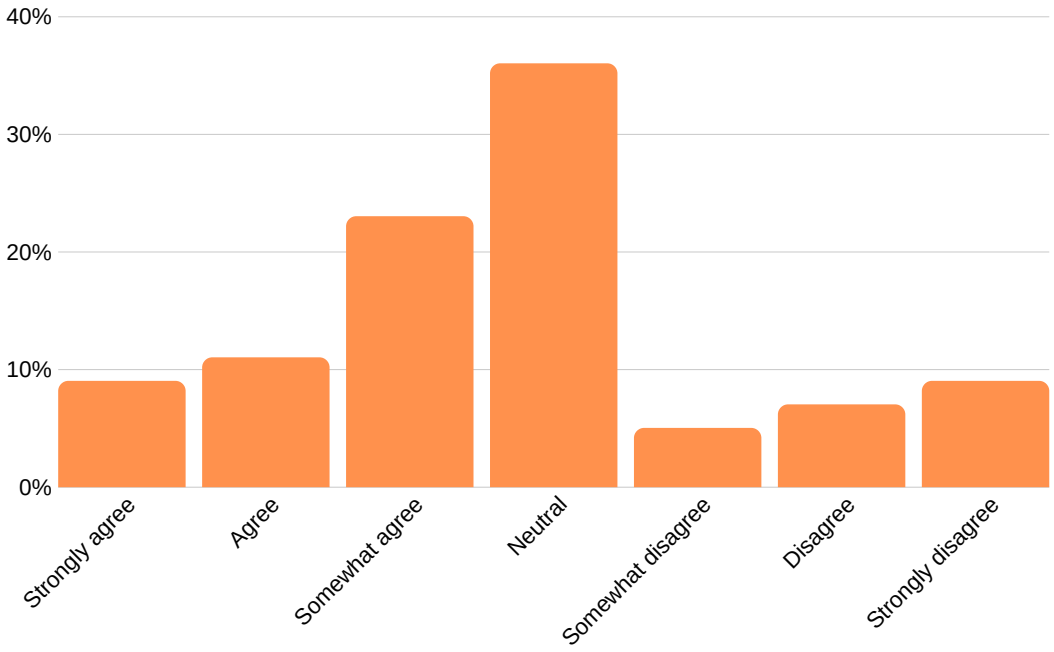


Figure 2: Likelihood of new technology adoption

Adding further context to this numerical evaluation, the qualitative interviews showed a range of recommendations skewed to technological solutions which were met favourably by clients. Namely, much of the suggested technology adoption was skewed towards online solutions and digital marketing. However, there were some examples of specific business applications. An example of this was provided by P,1, who will be adopting data analysis software to support real-time market research and analytics:

P, 1. "They suggested some really useful software that they used themselves during the project, I will be looking at this and hopefully will start using it to help analyse market data".

Impact on modern business practice adoption

When assessing the future adoption of modern business practices there was once again a significant positive skew seen within the survey data. Clients were asked to determine the potential for business practice adoption by recording their agreement with the statement below:

"I anticipate our organisation adopted new business practices as a result of this consultancy"

As can be seen in figure 3, 47% of clients responded favourably to this statement, ranging from somewhat, to strongly agree. This is similarly unsurprising given the varied focus of DEBC projects and their intended outcomes, however, none the less shows potential impact in terms of business practice adoption.

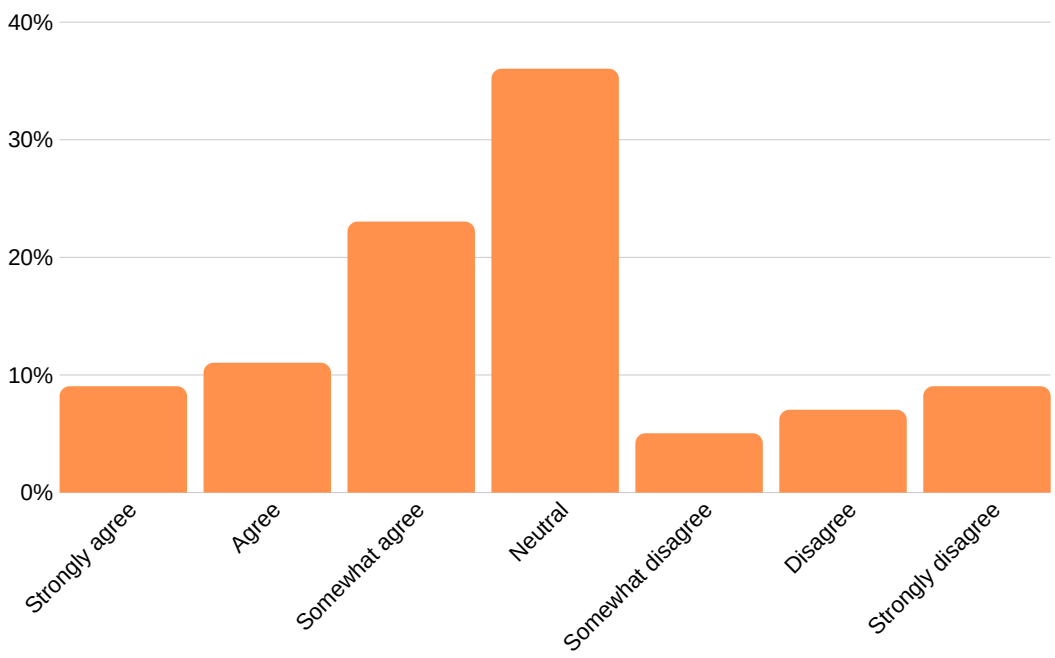


Figure 3: Likelihood of Modern Business Practice Adoption

Along with this broad appreciation, the qualitative data has shown where business practice adoption was seen or expected as a result of the DEBC projects. These centred predominantly on human resource management (HRM) and marketing practices, with 3 clients suggesting the possible implementation of the former, and 9 for the latter. For instance, P, 28, suggested they will implement marketing strategies linked to social media, enabling them to effectively target potential customers:

P. 28. "They said day one week one, just kind of go for social media, give 100 free users away, and ultimately, it's not really costing me much, so it's definitely something I will go for".

For HRM, the recommendations highlighted all fall within recruitment practices, moreover, as with marketing, the focus was in making better use of digital resources to attract appropriate candidates or source interns and volunteers. This was highlighted by P, 24, who saw the use of LinkedIn as a positive suggestion by their project team:

P, 24. "We will be changing how we recruit and using things like LinkedIn which should help in terms of the quality of people that we can bring in. It should lead to some quick wins as well, especially with Scottish and London Universities."

Impact on innovation

The DEBCs ability to impact or stimulate innovation within participating SMEs was highlighted by a number of clients. However, the data showed a lack of more radical innovation, rather, the innovative elements seen within client organisations would best be seen as incremental. In particular, the interview data highlighted three key areas where innovation could be seen, these were:

- Market strategy (8),
- Service design (3),
- Business processes (3).

In total, 13 clients saw the potential to innovate in one or more of these three areas, the majority of which were linked to incremental market innovations. An example of this use of market innovation is P,12, who, whilst attempting to penetrate the Chinese market has begun significantly adapting their current marketing strategy, opening a Chinese website and building personal relationships with intermediaries. This shift was suggested by students as a necessary change in strategy which will better fit the Chinese context.

P, 12. "I think the points around hosting a Chinese website are really useful. I think if it was just us in the office with our lack of experience, we probably would have just extended it and maybe offered a translation of what we have at the moment. So seeing the recommendations to actually get it on a Chinese server is really useful".

An interesting case for service innovation can be seen within P, 27. The essence of their brief was to assess the viability of offering specialist safety training within different industrial contexts. As a result of student consultation, the client has significantly changed the services offered to reflect market gaps (or the lack thereof).

P, 27. "They said, you know, there are areas that aren't worth going into considering where my business is. Things like pharmaceuticals, which is very highly regulated so a sort of one-man band like myself would find it difficult, so that's changed what I'm offering to customers and who I go after".

This shift in service orientation allowed the client to focus resources on key markets and products, which was seen as a way to maximise the return on investment when considering the time taken to build relationships and secure contracts.

Finally, when looking at process innovation, this varied depending on project focus as one would expect, with elements of business practice and technology adoption also playing a role here. One standout example of process innovation can be seen in P, 17, where, as a result of the DEBC project, the students identified a need to improve the processes involved in intern recruitment. This once again was seen as a positive step which would ultimately lead to better process outcomes.

P, 17. "We are going to improve the systems, and the selection criteria for some of the interns coming over, so to have specific forms, and improve the systems which they've identified as weak at the moment, which of course they are, that should help us match interns to companies better in the future".

Value for money & time investment

During the quantitative survey, all 47 clients were asked to give their perspective on the following question:

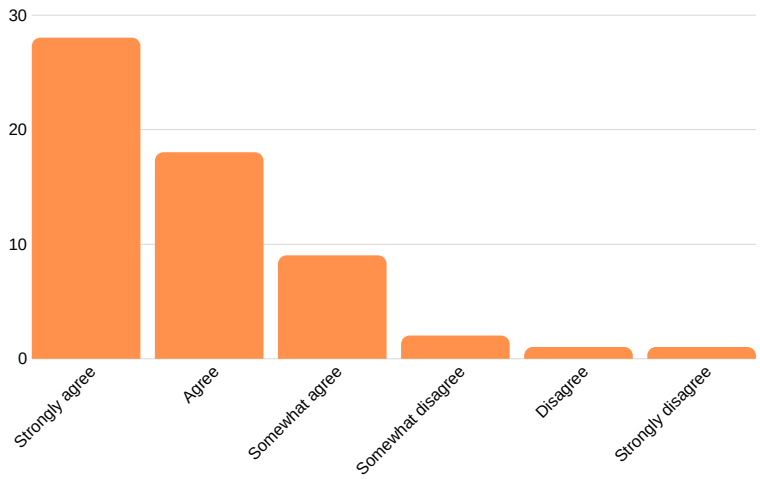
"How much would you have expected to pay for this consultancy/report if you had been buying this service professionally (in £s)?"

The Digitally Enabled Business Clinic has delivered £243,178 worth of value in consultancy advice to 47 participating SMEs, averaging £5,174 per project. This represents a £5.49 return for every £1 of funding. Such value represents productivity increases and/or innovation, technology adoption and modern business practice adoption. The estimated value and overall impact of DEBC projects may increase 6-12 months after the project, once firms have the opportunity to implement student recommendations and reap their full impact.

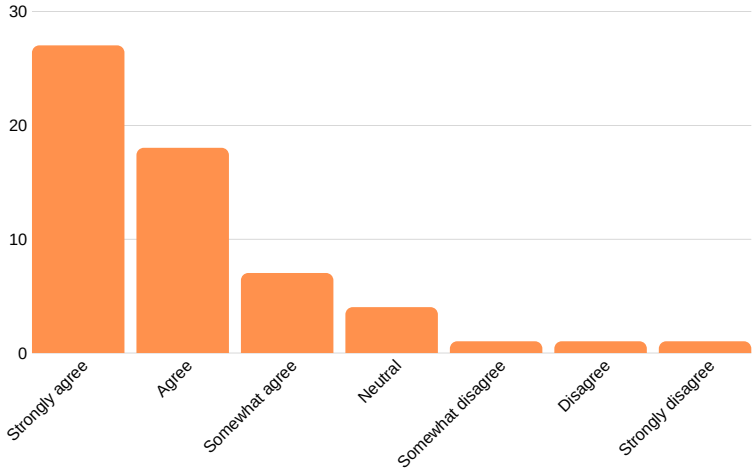
Impact on student employability

Whilst SME productivity was the central focus of the DEBC, the project also collected students' experiences and perspectives. Of the 57 students surveyed, 93% felt the DEBC helped prepare them for the graduate job market (Q12). Moreover, 89% of respondents felt the experience was enjoyable.

Q12: We feel the Business Clinic experience has helped prepare us for the graduate job market.



Q13: We have enjoyed our Business Clinic experience.



Technology usage was also tracked throughout the project. Social media was used extensively to collaborate on DEBC projects, with 74.58% of respondents using Facebook Chat/Messenger and 42.37% using Whatsapp. As expected, email was used heavily to collaborate during projects- 93.22% of respondents stated their group used it. However, video conferencing was much less popular with only 27.12% of participants stating their group used the platform. Finally, cloud storage was commonly used by student teams, with 76.27% of participants using the Google Drive suite (e.g. Google Docs, Google Sheets), followed by Pebble (69.49%) and Dropbox (11.86%).

Overall, these findings are very promising as they indicate DEBC graduates are satisfied with their experience and leave feeling better prepared for the graduate job market. Moreover, DEBC graduates understand how to incorporate modern technologies into business activities and this habit appears to have rubbed off on their clients (see Impact on technology adoption).

Areas for improvement

Research into the DEBC has shown a significant positive impact on SME productivity, however, whilst the student projects were for the most part successful, it is still worth considering areas for improvement moving forward. To facilitate this, clients were asked to identify potential shortcomings within the DEBC process, notably those which may have impeded the impact of their project. Thematic analysis of responses identified two key areas where clients thought the DEBC could improve, these included communication between the organisations and students, and what can broadly be considered “aftercare”.

Looking first at communication, the main criticism brought to the fore by participants was the lack of regular contact between themselves and the project teams. This was by far the most prevalent of the two issues raised with 18 interviewees suggesting a need to have more frequent contact. This issue was highlighted by P, 5, quite concisely in the following quote:

P, 5. "We assumed by saying 'get in touch', we conveyed we were open for more meetings. I was expecting to hear more from them [i.e. meetings/communication] but didn't"

Much of the concern around this lack of communication, related to peace of mind and a need to feel involved in the project at some level, but it was also seen as a potential barrier to students gaining valuable insight which could be used to the benefit of their final recommendations. This was particularly relevant to organisations such as P, 26, who operate in a niche industry that students were likely unfamiliar with. The organisation in question provided welding services and specialist training in compressed gas safety, requiring a high degree of technical knowledge. This was invaluable for the students to understand whilst undertaking the project, however, at times the client felt communication with themselves was insufficient to properly disseminate the information required.

The second element identified by interviewees was that of aftercare, in particular, eight clients expressed a need for further support in implementing the recommendations made by students, suggesting if this were the case, any benefits would be realised within a shorter time period:

P, 24. "It would be good to have the students continue in some way to implement the project findings, I have very little spare time".

It was even suggested that the DEBC could be connected to internship opportunities, both paid and unpaid, which would enable clients to implement recommendations alongside one or some of the students who developed them.

CONCLUSION

Importance of the DEBC

Northumbria's BC has delivered over £1.6 million worth of pro-bono consultancy over 6 years. Moreover, the model has been nominated for teaching awards from the Academy of Marketing and the British Academy of Management.

In the context of reduced public spending, it appears small businesses must turn elsewhere for support. However, university and SME interests are not always fully aligned, with the former criticised for pushing costly Knowledge Transfer Partnerships or PhD scholarships that may not generate tangible business results. The BC model is mutually beneficial for all stakeholders; SMEs receive pro-bono consultancy on a real business problem they specify, students gain valuable experience that distinguishes them on the job market, and the university has a strong vehicle for industry engagement and delivering impact. However, these benefits have come at a substantial cost to Northumbria University, including funding dedicated administrative staff, infrastructure and marketing activities. The DEBC allows other universities to reap those same benefits for its key stakeholders without significant financial outlay.

The results of this project indicate that the DEBC does enhance client productivity, and the only investment required from the SME is their time. Moreover, students felt their consultancy experience helped them become more competitive on the graduate job market. None of these outcomes were contingent on having infrastructure beyond what a typical university has, i.e. computers, classrooms and knowledgeable academic staff. Therefore, the DEBC represents a cost-effective means for universities to strengthen their impact and external engagement, produce more competitive graduates and simultaneously deliver the support SMEs need.

Next steps

Now that we have demonstrated the viability of the DEBC model there is a great opportunity to roll out the approach to universities across the UK. If InnovateUK wishes to enhance SME productivity nationally it would make sense to distribute child DEBC's across the UK. A 'Full Trial' could be funded by the 'Business Basics' fund to finance the development of 3-4 more DEBCs in UK universities. The DEBC Scale Up could be implemented within 24 months for £200,000. The project would:

- Implement the DEBC, as outlined in the forthcoming guide, in 3-4 UK universities.
- Design and conduct a controlled experiment assessing the performance of DEBCs across different universities. This experiment will also measure and compare the performance of Northumbria's traditional BC against the DEBC.
- Design and implement a referral system that incentivises newly developed DEBCs to market and help implement the model in other UK universities.
- Create an online hub that universities and clients can visit to market consultancy projects and sign up for pro-bono consultancy, respectively.
- Explore a franchise model for the DEBC centrally managed by Northumbria. Potential benefits of such an approach include exponentially increasing impact for the BC and ensuring new DEBC learn from the experiences of Northumbria staff.

APPENDICES

Appendix A

Client Survey - https://nbsnu.co1.qualtrics.com/jfe/form/SV_0HSs6NXrpF8pAIR

Appendix B

Student Survey - https://nbsnu.co1.qualtrics.com/jfe/form/SV_eJ0OF4NCurrLbpP